

NITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

INTELLIVISION, a Joint Venture, BRUCE ADAMS,)	
JOHN DANIELS and PAUL HOFFMAN,)	ECF CASE
)	
)	
Plaintiffs,)	CIVIL ACTION NO.
)	
v.)	07-CV-4079(JGK)(MHD)
)	
MICROSOFT CORPORATION,)	
)	
)	
Defendant.)	
)	

DECLARATION OF NATHANIEL POLISH

1. I, Nathaniel Polish, attach hereto as Exhibit A the report dated October 30, 2009, I submitted in the above-captioned case on behalf of plaintiffs, Intellivision, Bruce Adams, John Daniels and Paul Hoffman.

2. I hereby declare under penalty of perjury that all statements made herein and in the report attached hereto as Exhibit A are true.

December 20, 2010
New York, New York



Nathaniel Polish

EXHIBIT A

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

INTELLIVISION, a Joint Venture, BRUCE ADAMS,)	
JOHN DANIELS and PAUL HOFFMAN,)	ECF CASE
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)	
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Defendant.)	
)	

STATEMENT OF NATHANIEL POLISH

1. My name is Nathaniel Polish. I reside at 545 west 111th street, New York, NY 10025. I am the President of Daedalus Technology Group, Inc. I am over eighteen years of age and I would be competent to testify as to the matters set forth herein if I am called upon to do so.

2. I have been retained as an expert witness by Bruce D. Katz, Esq. Mr. Katz is counsel for plaintiffs, Intellivision, John Daniels, Bruce Adams, and Paul Hoffman (“Intellivision”) in an action pending before Judge Koeltl in the Southern District of New York entitled Intellivision v. Microsoft Corp., 07-CV-4079(JGK)(MHD). I have written this report at the request of Mr. Katz and on behalf of plaintiffs in the quoted action.

3. Specifically, I have been asked to opine, among other things, as to the subject matter disclosed in U.S. Patent Application Serial No. 11/097,807 (the ‘807 application) and U.S. Patent Application Serial No. 08/900,417 (the ‘417 application). I have also been asked to opine as to whether any Digital Video Recorders (DVRs) sold over the past decade include features disclosed in these patent applications.

4. In forming the opinions set forth herein, I have relied on my knowledge and experience in the field and on documents and information referenced in this statement. I submit this report pursuant to Fed. R. Civ. P. 26(a)(2)(B). I also anticipate being called upon to respond to any report submitted by a technical expert that might be retained by Microsoft after I have had an opportunity to review such report. I also understand that I may be asked to testify as to my opinions and in rebuttal to arguments that may be raised by Microsoft's expert witnesses at deposition, trial, or in additional reports.

5. Attachment A to this report contains a copy of my curriculum vitae, which includes a list of the matters in which I have served as an expert witness, testimony I have given over the last four years, and a list of my publications. I am being compensated by Intellivision for the time I have spent on this litigation at my customary consulting rate of \$475.00 per hour. My compensation is in no way contingent upon the outcome of this case. I will provide a brief summary of my qualifications herein, as I expect to testify regarding my background, qualifications, and experience relevant to the issues in this litigation.

6. I have a Ph.D. in Computer Science from Columbia University. In fact, I hold the following four degrees from Columbia, spanning the years 1980 to 1993:

- Ph.D. in Computer Science, May 1993, Thesis: Mixed Distance Measures for the Optimization of Concatenative Vocabularies in Speech Synthesis;
- M.Phil. in Computer Science, December 1989;
- M.S. in Computer Science, December 1987;
- B.A. in Physics, Columbia College, May 1984.

7. For about 25 years, I have run a computer technology development firm that I co-founded, called Daedalus Technology Group. My primary business activity is the development of computer-related products. This activity involves understanding the business objectives of customers, designing products to suit their needs, and supervising the building, testing, and deployment of these products. I develop hardware and software as well as supervise others who do so.

8. Also, from time to time I founded other companies in order to pursue particular product opportunities. I developed and ultimately sold these companies. Most of my business activity, however, is as a consulting product developer. From time to time I have also served as an expert witness on computer and software related cases. I am also a named inventor on four United States patents, and am a member of several professional societies, including the IEEE and ACM. I have extensive experience in several areas relevant to this case.

9. For various reasons, my background is well suited to an analysis of the art of the '807 patent application and related patent applications at issue in this lawsuit. I was actively developing systems and software for the distribution of digital video content during the pendency of the '807 application (and related patent applications filed by Intellivision). I have managed a software development firm for 25 years that has developed systems using digital video. I have myself developed, used and patented various aspects of such systems, including U.S. Patent No. 5,963,202, which issued on October 5, 1999 and is entitled "System and method for distributing and managing digital video information in a video distribution network." I have also served as an expert witness on behalf of Echostar Communications in a patent infringement lawsuit brought by Tivo, Inc. involving DVR technology. I am familiar with the technology incorporated into the DVR and a great deal of the relevant art available at the time.

10. The following opinions and analysis are based upon my review of the '807 application and various patents cited to or by the United States Patent & Trademark Office ("USPTO") during prosecution of the '807 application. I have also relied upon my own education, background, and experience in digital video technology, systems and software engineering and design, over the course of my career and education. The following opinions are based in part on my personal knowledge and experience. To the extent the following opinions are based on documents, the documents that I considered in reaching the following opinions are identified below.

11. The '807 application was filed on March 31, 2005. However, paragraph 0001 of the '807 application states that it is a continuation of U.S. Patent Application No. 09/952,852, filed September 12, 2001, which is a continuation of U.S. Patent Application No. 08/306,642, filed September 14, 1994, which is a continuation-in-part of U.S. Patent Application No. 08/038,240, filed on March 29, 1993.

12. The '807 application discloses a time shifting video recording apparatus capable of time shifting the display of broadcast quality television, having a first memory device for storing a received, broadcast quality video signal (such as a television program) and at least a second memory device for storing the received video signal during periods when the first memory device is not capable of storing the received video signal, such as when the first memory device is busy reading out a previously stored portion of the video signal. The '807 application discloses that each memory device may take any of various forms, such as a hard disk drive or a semiconductor memory, and may have a circular (or recirculating) structure. The '807 application also discloses an archival storage unit for storing a full version of the video content that has been temporarily stored in the first and second memory devices. This structure

enables the use of a disk storage unit commercially available at the time of the effective filing date of the '807 application to perform the simultaneous recording a received broadcast quality video signal and the simultaneous playing back of a previously stored portion of the signal.

13. Based upon my knowledge of the relevant prior art cited to or by the Patent Office during prosecution of the '807 application, it is my opinion that the subject matter disclosed by the '807 application and described in paragraph 12 is likely patentable for at least the following reasons. The ability of a Digital Video Recorder (DVR) to pause, rewind or cue live TV requires the use of a recording apparatus capable of continuously storing one or more streams of digital content (such as a received television signal) and simultaneously playing back a previously stored portion of that content. However, disk drives commercially available at the time of the 1993 and 1994 filing dates of the above cited patent applications could not perform these required functions. Disk drives then available had sufficient performance to record digitized video content. However, they lacked sufficient performance to store a received television signal and simultaneously read out a previously-stored portion of the television signal. The '807 application discloses various configurations that enable the simultaneous recording of a received video signal and the reading out of a previously stored portion of that signal. I am unaware of any prior art reference that contains such disclosure.

14. For instance, U.S. Patent No. 4,972,396 to Rafner and U.S. Patent No. 5,134,499 to Sata disclose the use of a disk recording apparatus modified to include two independently-movable head assemblies to independently write and read data to a single recording medium.

15. U.S. Patent No. 5,241,428, issued on August 31, 1993 to Goldwasser, proposes a variable delay video recorder utilizing a magnetic or optical disk drive. However, hard disk drives and optical recording drives available at the time of the 1993 issue date and 1991 filing

date of the Goldwasser patent lacked sufficient performance capabilities to handle the simultaneous recording of received audiovisual content and the reading out of a previously-recorded portion of the audiovisual content. Thus, the Goldwasser patent does not in my opinion provide an enabling disclosure for the implementation of a variable delay video recorder using a disk-based recording device such as a hard disk drive.

16. Furthermore, commercially available DVRs rely on the structure described above. The DVR was introduced as a commercial product in the form of a television set top box in 1999. I am familiar with the basic architecture of set top box and PC-based DVRs that have been sold since 1999. All such DVRs have a temporary storage unit, or pause buffer, for temporarily storing received video content, and an archival storage unit for storing selected video content transferred from the temporary storage unit. Furthermore, all DVRs have a buffer structure similar to that described in paragraph 12.

17. Furthermore, all set top box and PC-based DVRs that I am aware of that have been commercially available since 1999 have a user interface comprised of an Electronic Program Guide that allows a viewer to select programs to be recorded by the DVR. Later-filed Intellivision patent applications disclose such a user interface. Many commercially available DVRs also incorporate features disclosed, for example, in Intellivision patent Application No. 09/900,417, including: (1) the use of MPEG encoding for compression of a received analog television signal; (2) the generation of a viewer profile based upon viewer preferences and/or viewing habits; (3) controlling the DVR based upon activation of an embedded link contained in a television program (e.g., a coming attraction); (4) remote programming of DVR over a network, such as the Internet; (5) use of multiple tuners and/or multiple views of recorded or

received content; (6) individual/collaborative rating of programs; (7) program recommendations; and (8) use of the DVR to perform video on demand functions.

October 30, 2009

Nathaniel Polish


